Agribusiness and Economics Research Unit

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# Governing Value Creation and Capture in New Zealand Agribusiness Value Chains: A Case Study


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## Abstract

This research addresses a key question in the Our Land and Water National Science Challenge concerning the creation and capture of value for New Zealand's food and beverage exports. It investigates five case studies of established New Zealand global value chains to identify those value chain attributes important for the value chain to return value to the producer. The research developed a theoretical framework, which identified eight value chain attributes for exploration in the case study analysis. A further three attributes were revealed during the research. All five value chains highlighted the importance of 'values' to create 'value'. While value is an important driver of chain activities, firms were largely concerned with developing relationships in which trust became an implicit factor, based upon a foundation of shared values, vision, and culture. The presence of these throughout the chain, in addition to supporting incentives, was crucial in ensuring alignment within the value chain. This and other key findings are described in the report.



## Keywords

Value chains; Governance; Values-based enterprise; New Zealand agribusiness; Market orientation.

## ANZSRC Fields of Research

Agricultural Economics (140201); International Economics and International Finance (140210); Consumer-Oriented Product or Service Development (150501); Marketing Theory (150506).

# Table of Contents

# List of Figures



# List of Tables

# Executive Summary


This research has been funded by the Our Land and Water (OLW) national science challenge as part of the programme *Integrating Value Chains*. It addresses one of the main issues highlighted in the OLW theme "greater value in global markets". A key aspect is the creation of value chains to "ensure that producers – farmers and growers – have a share of the increased value created" by the country's food and beverage exports. This report offers insight into this issue by investigating five New Zealand market oriented value chains that appropriate value for agribusiness producers.

Traditionally, agribusiness exports have relied on producing commodities to quality specifications at competitive prices. Globally, competition has shifted towards supply chain versus supply chain. There has been a paradigm movement where the entire chain focuses on adding value and eliminating waste. This shift facilitates coordination and collaboration among actors in the chain to deliver products that meet the needs of the consumer in an efficient and effective manner.

Governance is the key to ensuring that chain actors work together towards a common goal. However, while there is an abundance of literature dedicated to bilateral exchange, there is a lack of previous research which investigates value chains as a system. Therefore, this research sought to investigate the value chain as a whole in order to identify those value chain attributes important for the value chain to be able to successfully return value to the producer.

The research developed a theoretical framework, which identified eight value chain attributes for exploration in the case study analysis of five New Zealand agribusiness value chains. This included asking questions specific to those attributes as well as further questions to understand the flow of the value chain in order to construct a governance typology.

Key findings from the research were as follows:

- Market orientation was important to all the chains. Even when the primary product has limited customisability, the story is able to be tailored to each market. Additionally, *manaakitanga* or caring for the consumer was a key driver for the value chains in ensuring that the product was produced to consumer needs, and met all quality and safety standards.

- Information sharing among chain members was largely facilitated by the lead firm in the chain and all chains regarded information as critical. Interestingly, most information existed in traditional forms of communication and there were very few integrated information technology systems present in the chains.

- Neoclassical economic theory makes assumptions about rationality of actors and opportunistic behaviour, citing the importance of formal contracts. However in the chains examined, collaborative governance was more important than contracts and incentive clauses. Hence, social behaviours play a large role in developing and maintaining relationships.

- All value chains highlighted the importance of 'values' to create 'value'. While value is an important driver of chain activities, firms were largely concerned with developing relationships in which trust became an implicit factor, based upon a foundation of shared values, vision, and culture. The presence of these throughout the chain, in addition to supporting incentives, was crucial in ensuring alignment within the value chain – the key to reducing frictions.

- Additionally, the values held by different chain actors were found to drive land-use change. Values such as stewardship for environmental sustainability, or *kaitiakitanga*, influence the way in which actors behave and so the value derived from land use was secondary. An interesting finding given the conceptual framework used to guide this research was based upon ‘value’ and customer demands.

- The research revealed an important distinction between leadership and power. Further, the leader may not be the most powerful actor in the chain. However, they act as the *kaumātua*, or mediator in the chain, holding and up keeping the shared values. The leader can engage in a number of activities in order to mitigate the power that downstream actors hold and ensure communication with the final consumer.

- Governance in value chains can be achieved through either centralised or decentralised governance, and both forms are able to achieve greater returns than a traditional supply chain. However, caution must be used in adopting a decentralised governance typology as the key factor in achieving value outcomes is by aligning the value chain through collaborative relationships and values.

- Innovation and learning were seen as crucial in ensuring that value chains remain competitive and continue to produce a value-added differentiated product. Value co-creation placed a heavy emphasis on this in terms of developing dynamic capabilities and improving the market proposition.

- Product quality was hugely important in the value chains examined, as it was seen as a critical factor in enforcing the brand promise sold to consumers. Certification schemes and quality control programmes were undertaken by most of the value chains and communicated to consumers through labelling and the telling of the brand story. The outcome of such, is the trust built by consumers.

While the findings of this research have provided a strong insight into the workings of collaborative, market oriented chains, more research is needed in this area. It would be beneficial for future research to focus on the creation of market oriented value chains, or to investigate how firms may adapt current practices to break out of producing commodities, and move into the high value-added market segment. The hope would be for the development of more sustainable value chains in New Zealand.

# Chapter 1
# Introduction

This research has been funded by the Our Land and Water (OLW) national science challenge as part of the programme *Integrating Value Chains*. It addresses one of the main issues highlighted in the OLW theme "greater value in global markets". A key aspect is the creation of value chains to "ensure that producers – farmers and growers – have a share of the increased value created" by the country's food and beverage exports. This report offers insight into this issue by investigating five New Zealand market oriented value chains that appropriate value for agribusiness producers.

This chapter highlights the key theoretical foundations that guided this research and introduces the research objectives of the current study.

## 1.1 Value Creation and Capture

Value is an important concept within the market oriented value chains project. Lepak, Smith and Taylor (2007) suggest that value creation and value capture are two unique, yet intertwined terms. Value creation may be defined as a process which leads to an increase in "…the customer's well-being, such that the user becomes better off in some respect" (Grönroos and Voima, 2013, p. 134). In contrast, value capture may be defined as "the net value that a focal firm claims successfully" (Wagner, Eggert and Lindemann, 2010, p. 841). The former is concerned with firm/chain processes and activities, whilst the latter is focused on the appropriation of profit between partners.

Value is created by organisations in a variety of ways. Two dominant research streams have developed regarding value creation: goods and services value, and relationship value (Lindgreen and Wynstra, 2005). The first of these, goods and services value, is concerned with the benefits and sacrifices of purchase and consumption (Zeithaml, 1988). The organisation's ability to create value and maximise net benefit for the consumer is largely contingent upon two factors: the firm's understanding of the consumer, and their ability to leverage capabilities and resources to deliver products with attributes that consumers demand (O'Cass and Sok, 2013).

Additionally, as firms exist within a system, value is also created when firms pool knowledge and skills to better meet the needs of the end customer, thus generating higher profits than would otherwise have been possible. Additionally when firms engage in repeated transactions, stability is fostered and transaction costs are reduced, while relationship development is supported (Fischer, 2013). Information sharing is promoted as each actor engages in trusting and committed behaviour, which in turn, increases integration along the value chain as visibility is improved and firms receive real-time information to aid in decision making (Li, Ye and Sheu, 2014).

*The value created in the value chain is contigngent upon an understanding of the final consumer, product offering atttributes, production processes, and communication between actors.*

In terms of value capture, the amount of value that a firm is able to appropriate is mediated not only by the governance mechanisms that exist between partners, but also the isolation mechanisms and frictions whose source may be either endogenous or exogenous to the chain. Isolation mechanisms are "…any knowledge, physical, or legal barrier that may prevent replication of the value-creating task, product or service by a competitor" (Lepak et al, 2007, p. 188). In this sense, isolating mechanisms provide organisations the opportunity to leverage their unique position and appropriate greater value. For example, in terms of the product offering, intellectual property rights are a key knowledge barrier that can be used to prevent product imitation within the market place (Duhamel, Reboud and Santi, 2014).

In contrast, frictions are seen as a source of value leakage, or destruction, where other actors who did not create value are able to capture a share of the profit, even those outside of the chain. Chatain and Zemsky (2011, p. 1206) define these as "…incomplete linkages in the industry and VC that keep some parties from meeting and transacting", and identify three key factors that hinder trade: search costs, transaction costs, and barriers to trade.

| |
|---|
| *The value captured in the value chain is contingent upon selected governance mechanisms, and the ability of firms to leverage isolating mechanisms and reduce frictions among actors.* |

## 1.2 Market Oriented Value Chains

Traditionally the agri-food industry has produced commodities. The focus of the supply chain has been to push product from the farmer to the market as efficiently as possible to satisfy demand schedules, while simultaneously achieving consistent quality and economies of scale through high volume production (Grunert et al, 2005; Macharia, Collins and Sun, 2013). Over time, these chains have begun to be criticised for being supply-driven and ignoring the voice of the customer, which leads to wrongly specified products and extra costs across the chain (Grunert et al, 2005). Hence there has been a shift from viewing agribusiness as commodity producing supply chains, to the concept of value-added, differentiated value chains.

The concept of the value chain (VC) was popularised by Porter (1985) to describe a firm's internal value-adding activities. Each firm along the chain becomes a vehicle for value-added production, where value is sequentially added. Generic strategies such as low cost production and product differentiation are suggested as ways to provide a competitive advantage in the market place. The VC concept has since been extended outside the internal firm, and is informally described as 'farm gate to plate' or 'beef to burger'. Kaplinsky (2000, p. 121) defines the VC as

> … the full range of activities which are requires to bring a product or service from conception, through the intermediary phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers, and the final disposal after use.

Indeed, the way competition is viewed has shifted from individual firms competing against each other, to chains competing against chains (Fearne, Martinez and Dent, 2012; Spekman, Kamauff and Myhr, 1998). Hence, the entire chain becomes a "vehicle for adding value and eliminating waste" (Sausman et al, 2015, p. 199). This paradigm shift facilitates coordination and collaboration among actors in the chain to deliver products that meet the needs of the consumer in an efficient and effective manner (Brinkmann et al, 2011; Spekman et al, 1998).

As an industry however, the agricultural sector has been among the last to adapt to the changes in consumer trends and demands (Roep and Wiskerke, 2012). There is a need to move from efficient production and market quality to 'value as defined by the end consumer'. In other words, firms within value chains must adopt a market orientation (MO), which Grunert et al. (2005, p. 430) define as

> … chain members' generation of intelligence pertaining to current and future end-user needs, dissemination of this intelligence across chain members, and chain wide responsiveness to it.

A MO focuses on communicating with consumers to understand their needs (Iliopoulos, Theodorakopoulou and Lazaridis, 2012) and then disseminating this information across the chain in order to make decisions about production, value-adding processes, and marketing (Grunert et al, 2005). When a chain adopts this view, it has the ability to develop a competitive advantage and superior long term chain performance (Grunert et al, 2005; Liao et al, 2011; Tukamuhabwa, Eyaa and Derek, 2011), by producing consumer value that is both rare and difficult to imitate. Hence, the chain is able to outperform less market oriented chains (Crittenden et al, 2011; Slater and Narver, 1994).

One of the challenges facing the agri-food industry in general is that chains are not large enough to achieve adequate economies of scale. Consequently, many chain actors find market demands are not adequately communicated throughout the chain. Additionally, the diversity of production is often times not exploited as effectively and efficiently as it could be for serving the end-market (Trienekens et al, 2012). The challenge is then how to improve this, and so the current research explores these issues through an investigation of the governance of agribusiness value chains.

> *Market oriented value chains are able to create and capture added value through a deep understanding the final consumer, and a chain wide response to their needs to offer high-value products that are rare and difficult to imitate.*

## 1.3 The Governance of Value Chains

The governance of value chains may be viewed in terms of bilateral arrangements between firms, or as a system.

*Bilateral Governance*

The bilateral view of exchange can be separated into two schools of thought, the rational and the relational. The rational school utilises economic theory that emphasises the self-interested nature of actors, utility maximising, bounded rationality, opportunism, moral hazards and adverse selection problems (Eisenhardt, 1989; Williamson, 1985). Minimising transaction costs is a central concern of this school and is critical when considering value appropriation and the impact of value leakage to other actors.

Indeed, governance under this school emphasises contracts, power, and other formal arrangements that attempt to mitigate the assumed opportunism of partners. Hence, risk adverse actors attempt to transfer risk and costs to their exchange partners, and attempt to control ‘behaviour’ through a number of contract forms (Eisenhardt, 1989; Fayezi, O'Loughlin and Zutshi, 2012). Thus, formal arrangements in the value creation and value capture processes are important, since the contracting schema acts as a form of isolating mechanism. Contracts guide the coordination that is critical for product and information flows, while incentives ensure that process flows throughout the chain are aligned.

The relational school explores where behavioural norms dominate, and mediate, the relationship patterns and expectations that emerge from reciprocity. In this sense, Relational Exchange theory and Social Capital theory become useful lenses where mechanisms such as trust, commitment, joint action, and cooperation become key safeguards against any opportunistic behaviour surrounding value capture (Dwyer, Schurr and Oh, 1987). The focus is on reciprocity and collaboration between actors and this school argues that trusting relationships can indeed reduce risk, uncertainty and hence transaction costs. It is argued that collaboration is a legitimate form of governance in its own right (Matopoulos et al, 2007).

Morgan and Hunt’s (1994) trust-commitment theory suggested that commitment and trust lead to cooperative behaviours that promote marketing success, rather than a firm’s use of coercive power in order to condition and control the value capturing actions of others. Joint action requires parties to carry out “the focal activities in a cooperative or coordinated way” (Heide and John, 1990, p. 25) and helps to improve participative management of the relationship, as well as playing a central role in cooperative strategy (Dyer and Singh, 1998; Wang and Wei, 2007).

*Systems Governance*

The systems view of exchange looks at the value chain structure as a whole, and again there are two key perspectives on systems governance. The first views governance through the lens of structural typologies. Gereffi, Humphrey and Sturgeon (2005) suggest that the choice of governance structure is underpinned by the required complexity of information and knowledge transfer, and the extent to which this may be codified, and the capabilities of suppliers. The authors identify five forms of chain wide governance:

1. **Market** – exchange is controlled by the market. Repeat transactions may take place and switching costs are low for both parties;

2. **Modular** – products are made to customer specifications. However, value is created internally by the turn-key supplier, limiting transaction specific investments;

3. **Relational** – increasing complexity results in mutual dependence and asset specificity between members. Value is created and captured through spatial proximity of chain linkages, and normative behaviours developed over time;

4. **Captive** – a high degree of monitoring and control is exhibited by lead firms. Small suppliers are dependent on larger buyers and face high switching costs, hence, they are held 'captive' in these chains;

5. **Hierarchy** – a vertically integrated governance structure, with a top-down approach to management, both internally and between the organisation and subsidiaries.

With the exception of market chains, the lead firm has a crucial role in the other four models of governance, acting both as a gatekeeper to VC participation, and as a facilitator of value creation in terms of when, where, how, and by whom value is added (Gereffi and Lee, 2016). In general, power within the chain is concentrated downstream, lying with firms closest to the final consumer (Konefal, Mascarenhas and Hatanaka, 2005). Large retailers, such as supermarkets, typically hold high levels of power over suppliers due to their scale, and may tightly control specifications using different sources of power (Brito and Miguel, 2017; Ponte and Sturgeon, 2014). Further, Nyaga et al. (2013) suggest that the use of power will affect the adaptive and collaborative behaviour of partners, since there is greater potential for opportunistic behaviour by the more powerful partner.

The second view of systems governance investigates the role of networks and suggests that firms exist within a network of sociological relationships, which Jones, Hesterly and Borgatti (1997, p. 911) refer to as

> … co-ordination characterized by informal social systems rather than by bureaucratic structures within firms and formal contractual relationships between them – to coordinate complex products or services in uncertain and competitive environments.

Along this line, Provan, Fish and Sydow (2007, p. 481) suggest that the sociological themes are consistent, often citing "…social interaction, relationships, connectedness, collaboration, collective action, trust, and cooperation". Rather than a series of formal arrangements between firms, networks emerge out of social mechanisms that facilitate relationships among actors in order to achieve network goals (Alvarez, Pilbeam and Wilding, 2010). However, while networks are made up of autonomous firms where social contracts are often enacted (Jones et al, 1997), there is also a need for some type of formal governance within and across the network as a whole to ensure that network goals are met, conflicts addressed, and resources used both efficiently and effectively (Provan and Kenis, 2008).

*Bilateral and systems governance views of exchange emphasise formal and informal arrangements between firms, in order to optimally leverage resources and capabilities within the value chain to meet the needs of the end consumer.*

Currently, the literature on end-to-end chain governance is relatively sparse (Gellynck and Molnár, 2009; Trienekens et al, 2017). There is a need to empirically investigate value chains as a whole in order to identify those value chain attributes important for the value chain to be able to return value to the producer. Hence, the following section introduces the research objectives for this study.

## 1.4 Research Objectives

Land-based value chains are often characterised by a lead firm governance structure, whereby one firm (generally located downstream) acts as a gatekeeper to the market (Konefal et al, 2005). In commodity chains, suppliers such as farmers typically hold little power as market signals are poorly communicated upstream by retailers who control data on consumer segment preferences, resulting in information asymmetry and power imbalances (Ponte and Sturgeon, 2014; Vlachos, 2014).

In the case of value-added differentiated VCs, the lead organisation may not be the retailer. Better coordination across the chain can be the result of intelligence gathering by the lead firm, information sharing and responsiveness by chain members (Matsuno, Mentzer and Rentz, 2005). Consequently, there is a possibility for greater value creation, and greater capture by those who create the value, without the need to surrender to large and powerful actors downstream.

In New Zealand this is a key issue as many VCs lack the scale to be able to successfully negotiate with retailers. Therefore, the way in which many agribusiness chains are able to hold power within the chain is through the production of value-added differentiated products. Within the industry there are a number of VCs that are able to successfully capture value and appropriate this back upstream to domestic producers.

Thus, collaboration and market orientation are key features of VCs that are able to effectively return value capture to producers. However, several other VC attributes are instrumental in the capture of value. This research aimed to identify and explore these further. To do this, the research was guided by three main research question:

***RQ1. How is value perceived within firms and exchange?***

***RQ2. How is value created and governed in agribusiness market oriented value chains?***

***RQ3. How do agricultural value chains alter or reconfigure themselves in relation to value signals?***

To address these questions, the report is structured as follows. Chapter 2 presents the conceptual framework developed to guide the research phase, and introduces the propositions that were integrated into the interview protocols. Chapter 3 highlights the case study methodology adopted for this research. Following this, chapter 4 describes the results from the case study. Chapter 5 offers some conclusions from the research.

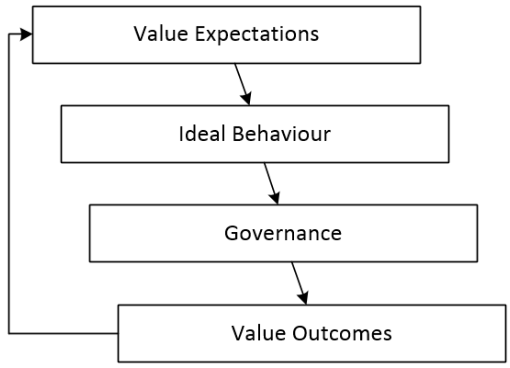
# Chapter 2
# Research Framework

Building upon the preceding discussion on value and governance in value chains, this chapter outlines the research framework used to guide this research, including an outline of eight propositions that were explored in the case study.

## 2.1 Logic of the Research Framework

Figure 2.1 presents the basic logic of the framework. Its premise of is that by adopting a value chain (VC) or a market orientated logic, the value expectations of the end customer must be the first consideration of all VC members. Therefore, the defined customer expectations drive the 'ideal behaviour' of value chain members as they create and capture value through resource leveraging and production choices for their product offerings. This proposed ideal behaviour should drive the governance choices that then dictate how the chain arrangements are organised and managed. The intent being to restructure and/or re organise the value arrangements in response to changing consumer expectations, behaviour and the environment.

**Figure 2-1: The Basic Decision-making Framework**

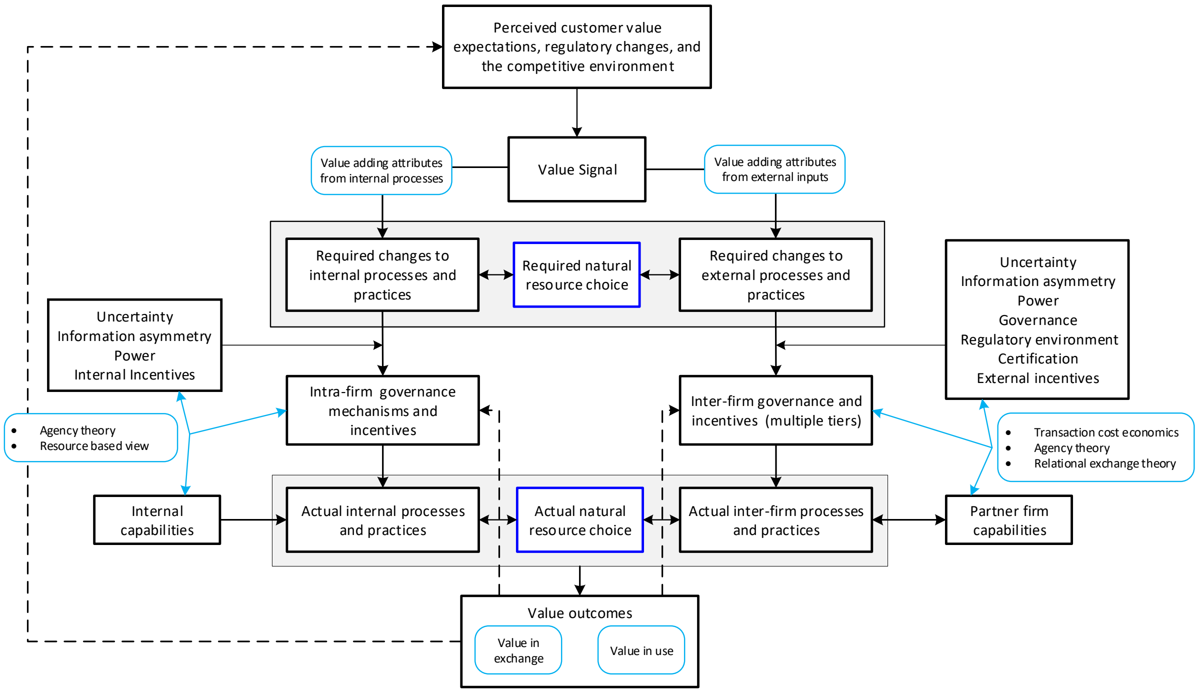



The governance structures mediate the value outcomes of the chain and the behaviours of the individual actors within it. Firms evaluate the value outcomes of production and adapt or reconfigure their behaviour in order to better meet the expectations of the final consumer. However, this may only be done when organisations understand and communicate the credence attributes thoughout the value chain. The actors within the value chain are motivated by an implicit assumption that collaborative actions and complying with value chain norms will generate greater rents for all. Hence, the delivery of value is not a discrete activity, but an ongoing process requiring continuous changes by the VC as a whole. The extended theoretical framework to guide this research can be seen below in Figure 2.2.

Figure 2.2 extends the logic of Figure 2.1, whereby the required changes, governance, and actual processes and activities of firms are separated into an internal view and an external view. This allows an analysis of VCs to take place at the firm, bilateral, and VC levels, thus providing a contribution to the dearth of end-to-end chain governance literature. Additionally, the framework acknowledges the importance of natural resource choice, an important factor of land-based VCs. In terms of governance, mediating factors both endogenous and exogenous to the chain are highlighted in the framework as an important influence on incentive and governance choice.

The key to achieving value outcomes is derived not only from understanding the final consumer, but also understanding the key attributes that contribute to value creation and capture within the VC. It is by examining how these value chain attributes are deployed both internally and externally through the decision framework of the conceptual model in Figure 2.2 that produces a systems view of VC governance based upon this project's case studies. Hence, the remainder of the chapter examines those key value chain attributes discerned from the literature in order to derive a number of propositions.

**Figure 2-2: Theoretical Framework of the Focal Firm's Governance Decision-making Framework to Create and Capture Added Value in the Value Chain**




*Source*: The authors.

## 2.2 Development of Eight Propositions

This research identified from the literature five major attributes that help facilitate value generation and capture. These are:

1. Market orientation
2. Information enriched value chains
3. Aligned incentives through the value chain
4. Channel leadership (power)
5. Integrated network governance models

An additional three supporting attributes that help create value were also identified:

6. Value co-creation
7. Resilience and adaptability
8. Brand ownership and control

Each of these attributes are now discussed in the subsections that follow.

*Market Orientation*

Market orientation (MO) refers to the mental models held by decision makers in the value chain, and the extent to which these actors use market intelligence, especially about the end consumer, to influence their value generating activities. This is known as 'visibility of preferences' (Grunert et al, 2010). There is evidence that a market orientation has a positive impact on firm performance (Liao et al, 2011) and MO is often correlated with learning (Santos-Vijande et al, 2005) and innovation (Im, Hussain and Sengupta, 2008). Learning facilitates competency development, and Søndergaard (2005) suggests that when MO is coupled with innovation, an understanding of customer needs leads to better serving the market through new product development. This suggests that a MO is a key factor in creating value. Hence, the research explored the proposition that:

> **$P_1$. A market orientation is a key antecedent for network governance that facilitates value creation and value capture.**

*Information Enriched Value Chains*

The lower the level of information asymmetry in the value chain, the lower the risk of opportunistic behaviour, leading to greater value creation potential. This involves three major information flows in a VC;

1. The dissemination and communication of the value proposition to the consumer.
2. The dissemination of market intelligence of consumer credence attributes and preferences.
3. The dissemination of operational information (planning, forecasting and physical distribution) that coordinate the day-to-day activities of the value chain.

Value creating chains operate in an information rich environment displaying high levels of awareness of the value proposition and consumer credence attributes by all participants along the VC. This visibility then drives innovation, product/market development, investment decisions and governance arrangements (Jiménez-Zarco, Martínez-Ruiz and Izquirdo-Yusta, 2011). Those who hold the information in the value chain are best placed to capture value. Hence, the research explored the proposition that:

> **$P_2$. Network governance promotes high levels of information visibility and symmetry at each level of the value chain thus increasing value creation.**

*Incentive Alignment*

In terms of incentives, Hobbs (2003) suggests that there are three broad categories related to land-based VCs; economic, regulatory/legal, and human capital. Aligning these within the VC is crucial for delivering value to the end consumer. Conversely, misalignment of incentives exacerbates the issue of frictions (Chatain and Zemsky, 2011), and causes value destruction within the chain through problems such as excess inventory, stock-outs, poor forecasting, and inadequate sales efforts (Narayanan and Raman, 2004).

Agarwal, Croson and Mahoney (2010) suggest that there are two main categories of incentive alignment: economic and communication. Narayanan and Raman (2004) offer three solutions to encourage redesign or alignment: rewriting contracts, revealing hidden information, and developing trust. Incentive schemes should be aligned to produce behaviour consistent with the overall VC objectives, not local goals (Simatupang and Sridharan, 2004), and hence chain wide governance structures emerge in response to incentive alignment. Consequently, the research explored the proposition that::

> **$P_3$. Network governance aligns incentives throughout the value chain that lead to better value outcomes for chain members and the value chain network.**

*Channel Leadership (Power)*

In terms of channel leadership, Provan and Kenis (2008) argue for two main forms of decision making: shared/decentralised or centralised coordination. While there are some advantages in the democratic process of the decentralised model, the decision making process can be messy and time consuming. Indeed, given the exigencies of a rapidly changing market place, there is merit in centralising decision authority in the 'lead firm' governance. Many agribusiness value chains producing value-added differentiated products demonstrate this form of governance. The risk is the loss of the democratic voice of value chain actors, and the exercise of coercive power to enforce compliance as opposed to the use on non-coercive forms of power. However, benefits accrue as a result of a centralised voice or leadership such as a greater channel alignment to the value signals, greater efficiencies, and value. Hence, the research explored the proposition that:

> **$P_4$. Value chains that have a lead organisation governance type that use non-coercive sources of power achieve greater value outcomes for the chain members.**

*Integrated Network Governance Models*

Value generating chains will demonstrate integrated governance models based on collaborative protocols (Soosay and Hyland, 2015). These act both as *enforcing mechanisms* to ensure compliance and mitigate self-interested behaviours (Stump and Heide, 1996), and as *facilitation mechanisms* to promote joint action, reciprocity and collaborative behaviours (Matopoulos et al, 2007). Collaborative relationships have a strategic long-term focus and are fostered on the premise that the relationship interaction itself co-creates additional value for both the customer and the supplier when applied along the VC (Grönroos, 2004).

Managers hoping to enhance relationship value often work towards more collaborative forms, with Arndt (1979, p. 72) concluding that "…both business markets and consumer markets benefit from attention to conditions that foster relational bonds leading to reliable repeat business". Trienekens et al. (2017) found that in market oriented chains, spot market (arms-length transactional) contracts were rarely used, concluding that a certain level of integration may be conditional factor in being market oriented. The study's key concern is in trying to understanding collaboration as a mechanism for chain wide or network governance; hence, the research explored the proposition that::

> **$P_5$. Network governance arrangements based on the collaborative protocols of common goals, reciprocity, shared risks and rewards, trust and commitment allow greater alignment with value signals and hence, facilitate value creation and value capture.**

*Value Co-creation*

Geiger et al. (2012, p. 84) define relationship value and co-creation as "…the sum of the benefits and cost reductions generated in an ongoing exchange with a business partner". Value is co-created by the ongoing interactions between organisations within the VC and is driven by necessity as the competitive environment forces firms to seek access to different combinations of resources from partners (Helm and Jones, 2010). Co-creation of value happens between firms and within the whole network and can be thought of as a combination of both 'tangible value' (such as profit and access to assets) and also 'intangible value' (such as access to new markets, knowledge, innovation and relational) (Reypens, Lievens and Blazevic, 2016). Hence, the research explored the proposition that:

> **$P_6$. Network governance aids the co-creation of value through various combinations of tangible and intangible resources with partner firms in the network.**

*Resilience and Adaptability*

Value generating chains are resilient to disruptions and adapt quickly to new conditions, competition and economic uncertainty. Value chain resilience is the ability of the system to absorb shocks and to return to equilibrium after the disturbance (Christopher and Peck, 2004), and involves pre-disturbance preparation and post event response efforts (Chowdhury and Quaddus, 2016). Adaptability is the ability to reshape the nature of the value chain in response to disruptions, disasters, changes in business imperatives and economic realities (Pettit, Fiskel and Croxton, 2010). Resilience and adaptability allow value chains to quickly adjust to changing markets and to absorb disturbances with minimal disruptions. Therefore, the research explored the proposition that:

> **$P_7$. Value creation and capture are maintained through the value chain properties of resilience and adaptivity to natural and business disruptions.**

*Brand Ownership and Control*

Chains that adopt a differentiation strategy (product and/or market) will demonstrate strong brand ownership and control over product, price, promotion and place activities by maintaining control as far downstream as possible, preferably to the final consumer. It is argued that the higher the level of control by agricultural producers, the greater amounts of value they are able to appropriate. Depending on levels of vertical integration, this can also take the form of ingredient co-branding strategies (Erevelles et al, 2008). Indeed, a key aspect for agricultural chains is the level of consumer identification with the brand story (place, people and production) of the product and the explicit links with the producers. Helm and Jones (2010) argue that brands are often the most valuable assets owned by a firm and that value is created not only by the brand, but through the consistently delivery of the brand promise to consumers. Often these brand promises are validated for consumers through auditing and certification schemes to ensure brand promises are real and meet relevant industry standards. Hence, the research explored the proposition that:

> **$P_8$. Network governance facilitates brand ownership and control through a value chain by producers, and the consistent delivery and auditing of the brand promise.**

Having introduced the propositions used to guide this study, the following chapter outlines the case study methodology used in the current research.

# Chapter 3
# Methodology

This chapter details the case study method used for this study. It outlines the case study method. Following this, the ethical and confidentiality considerations made in the research design and implemented in the study are highlighted, and issues around trustworthiness are also acknowledged. The interview protocol design stage is explained and finally, the chapter describes the data collection phase of this research.

## 3.1 Case Study Method

A case study is a detailed examination used to generate an in-depth and multi-faceted understanding of a social phenomenon within a real life context (Schwandt and Gates, 2018). Yin (2018, p. 2) suggests that a case study approach may be used when the "main research questions are 'how' or 'why' questions… you have little or no control over behavioural events, and your focus is a contemporary phenomenon". Based upon this, there are three criteria to consider in selecting a case study approach. First, the current study seeks to understand 'how' value creation and value capture are governed in agribusiness value chains. Second, because the researchers are attempting to gain a deep understanding of a phenomena and not to control a particular situation, in-depth interviews offer a direct approach to search for data. Finally, this research explores current practices among value chain network actors, rather than a historical event. Based upon these three selection criteria, a case study methodology is adopted for this study. However, before undertaking any research it is important to consider the confidentiality and ethical procedures, as well as the quality considerations.

## 3.2 Confidentiality and Ethical Procedures

Due to this research being conducted with business organisations, there were potential issues around the confidentiality and disclosure of commercially sensitive information, as well as the protection of the participants and organisations. To address this, two precautions were taken. The first was the removal of company and participant names from the transcriptions, as well as care taken in the data analysis, storage of data, and report writing. The second was the signing of a non-disclosure agreement between representatives of Lincoln University and some parties in the research.

Another key concern is the enforcing of ethical procedures. Lincoln University Human Ethics Committee guidelines do not require formal approval for participants who are interviewed within their professional capacity. Nevertheless, to ensure that interview respondents were well informed, information was provided to the organisation prior to the interviews taking place. Further, at the beginning of the formal interviews the interviewer was responsible for making sure that the interviewee was aware of the purpose of the interview, that participation was voluntary and could be withdrawn at any time, and that the interviewee had the right to decline to respond to any of the questions. The interviewer then clarified any questions that the interviewee may have had, and obtained verbal consent to proceed with the interview.

## 3.3 Trustworthiness

Miles, Huberman and Saldaña (2014) state that there are five main issues to assess when establishing the trustworthiness of a study:

(1) objectivity/confirmability,
(2) reliability/ dependability/auditability,
(3) internal validity/credibility/authenticity,
(4) external validity/ transferability/fittingness, and
(5) utilisation/application/action orientation.

Objectivity is concerned with reasonable freedom from unacknowledged researcher bias. Consequently, the researcher needs to be aware of the inevitable biases that exist, and make efforts to explicitly state methodological considerations and ensure that possible rival conclusions are considered (Miles et al, 2014). Where case studies are concerned, two tools critical in ensuring this are the use of a case study protocol, and the development of a case study database.

Internal validity assesses the "truth" or credibility of the findings. In other words, are the findings plausible and descriptions context-rich and meaningful (Miles et al, 2014)? This study aimed to enhance the internal validity through the use of semi-structured interviews which acted in a way to guarantee the research team had time to fully understand the context and phenomena being examined (Baxter and Jack, 2008). Additionally, findings were shared among all research teams to provide an opportunity to share feedback on the accuracy of the transcription of field notes, and also to discuss any of the findings.

External validity is concerned with "showing whether and how a case study's findings can be generalised" (Yin, 2018, p. 42). One key tool for ensuring this are the research questions for the study and interview protocol design. Additionally, Miles et al. (2014) suggest that the processes and outcomes outlined in the conclusion should be relevant in comparable settings, and the findings are connected to prior theory.

Finally, utilisation addresses the issue of applicability of the research for participants (Miles et al, 2014). It is important that even if transferability is established, the researcher explicitly states the implications of the research; this is described in Chapter 5.

After taking into consideration factors related to confidentiality and ethics, and trustworthiness, the remainder of this chapter explores the data collection procedures used in the current study.

## 3.4 Interview Protocol Design

This study utilised semi-structured interviews they involve the use of pre-formulated questions, but there is no strict adherence to them (Myers, 2013). This is the most used form of interviewing in human and social sciences because they allow more opportunity for knowledge generation as responses may be followed up during the interview. Further, they allow the interviewer to manage the direction of the interview through the use of open and closed questions, and questions may be improved through paraphrasing, probing, and summarising (Brinkmann, 2018).

A key consideration is the design of the interview protocol that acts as an outline for the interviewer to obtain insights into the topic of interest (Yin, 2018). The use of a protocol allows interviews to be conducted in a more structured way than conducting interviews through informal conversations. This is particularly important when conducting several interviews across multiple organisations as it reduces misinterpretation of questions by respondents (Bryman and Bell, 2007). Additionally, in the case where interviews are conducted by a team of researchers rather than a single individual, a case study protocol improves the reliability of the study (Ellram, 1996).

For this research project, the protocols were developed from the propositions derived in Chapter 2, based upon reviewed literature in an effort to address the study's research questions. To do this, each attribute had a research question developed, which acted as a guide in designing the key interview questions to be used in the data collection phase.

The data collection was undertaken by five multi-disciplinary teams consisting of two researchers. Therefore, it was critical that a firm understanding of the terminology was achieved, particularly when considering the different academic backgrounds of the researchers. To address this, a two day workshop was held in which five academics, and four industry professionals gave further input into the interview protocol. Additionally, focus group discussions were also held around what sort of information the researcher was attempting to elicit from the respondent, and prompting questions were developed. The basic set of questions is reproduced in Table 3.1 below.

**Table 3.1: Basic Interview Protocol**

| **Attribute One: Market Orientation** |
|---|
| *Research question:* How do you receive information about what your final consumer's want, and how do you process this information into actions to increase returns?<br>*Key interview question:*<br>• Do you receive any signals from the consumer?<br>• How do you get these and how do you respond? |
| **Attribute Two: Information Enriched** |
| *Research question:* What technologies/sources do you use for communicating with which partners in the value chain, and allowing them to communicate with you?<br>*Key interview question:*<br>• How and who do you communicate with in the value chain?<br>• How often do you have this communication and how good is this communication (e.g. how does it help you?) |
| **Attribute Three: Incentive Alignment** |
| *Research question:* How do your formal contracts or informal arrangements in the value chain reward partners for meeting customer expectations and values, and has this changed?<br>*Key interview question:*<br>• What rewards (including non-financial) do you get for meeting consumer requirements? And has this increased/changed?<br>• How important are the contract clauses in shaping your behaviour?<br>• What benefits are not covered by contractual arrangements? |
| **Attribute Four: Channel Leadership / Power** |
| *Research question*: How are the overall policy and values of the value chain determined and enforced; who calls the shots and how is this done?<br>*Key interview question:*<br>• Who leads the value chain?<br>• How do they influence you and your decisions?<br>• How much influence do you have over their actions? |
| **Attribute Five: Integrated Network Governance** |
| *Research question*: How are the different relationships in the value chain integrated to create a collaborative value maximising strategy? Do these social agreements help safeguard exchanges? Do they prevent opportunistic behaviours by others?<br>*Key interview question:*<br>• How does the value chain work as a whole, beyond the bilateral relationships?<br>• Can you describe the collaborative relationship connections (not legal, but socially binding agreements) up and down the value chain? |

*Table continued on following page.*

| **Attribute Six: Value Co-creation** |
|---|
| *Research question*: What do the different partners in the value chain contribute (especially intangible assets or specialist capabilities) to delivering value?<br>*Key interview question:*<br>• What key resources (tangible and intangible) do you contribute to the value chain?<br>• What key resources do you need from your value chain partners?<br>• Who pays for R &D and Innovation and who holds the IP in this value chain? |
| **Attribute Seven: Resilience and Adaptability** |
| *Research question:* How does each partner respond to shocks in the environment, and how does the value chain as a whole respond? How does the value chain deal with uncertainty and risks?<br>*Key interview question:*<br>• What are the key risks to you and your value chain? Do you have a plan to mitigate these?<br>• How easy is it for you to change your practices to meet changing consumer requirements and also the changing business environment?<br>• Can you describe any changes to land use practice in response to changing consumer requirements the business environment? |
| **Attribute Eight: Brand Ownership and Control** |
| *Research question*: How do different partners influence one or more parts of the brand narrative?<br>*Key interview question*:<br>• Do you know how the brand story is presented at retail?<br>• Do you have an input into how this is presented?<br>• Describe your input into the definition of the brand?<br>• Describe your equity in the brand?<br>• How is the brand audited? |

## 3.5 Data Collection

Cases for study were purposefully selected based upon the following criteria. First, the value chain must be New Zealand based as the research has a distinct New Zealand context. Second, the research is focused on agribusiness value chains, and so the selected cases must operate within this sector. Third, there must be at least four links in the chain and multiple channels to market, to guarantee both complexity and scale. Four, the chain is required to produce a value-added product rather than a commodity. This ensures that the case is a 'true value chain' as embodied by the value chain philosophies.

Based upon these criteria, five New Zealand agribusiness organisations were secured for the data collection phase. Relationships were established with a key employee in each of the case organisations to act as a coordinator in securing interview respondents. The research team worked closely with the coordinator to ensure familiarly with the study, and recognition of what the research was aiming to achieve. The interview phase of the data collection took place over a six month period. Two researchers were responsible for conducting the interviews within each of the cases. Field notes and summary notes were taken by every researcher present at each interview.

Following the data collection phase, the results were collated, and are summarised in the following chapter.

# Chapter 4
# Results

The research phase for this study took place between March and December 2018. Five New Zealand primary industry value chains were selected for analysis, with the first three months of research being focussed on relationship development and obtaining research participants. The interviews then took place over the following six month period. This chapter outlines results from these case studies. It begins with an overview of the participants and highlights the governance structures that emerged during the interview process. The chapter then describes the key value chain attributes revealed in the study. These include the propositions described in chapter 2, but the study also found three additional value chain attributes.

## 4.1 The Value Chain Participants

Five value chains were selected for their variety of product offerings, and governance structures:

- Value Chain A: horticultural value chain with a lead firm coordinating the chain
- Value Chain B: boutique meat chain with a distributed governance structure
- Value Chain C: non-perishable land based production chain, governed by an integrated virtual system
- Value Chain D: seafood chain governed by the market
- Value Chain E: wine chain with a centralised governance structure

One of the aims of this research was to add to the end-to-end governance literature and view the value chain as a system, rather than as bilateral relationships. Therefore, an effort was made to obtain interview participants from a number of different stages along the value chain. A summary of these can be seen below in Table 4.1.

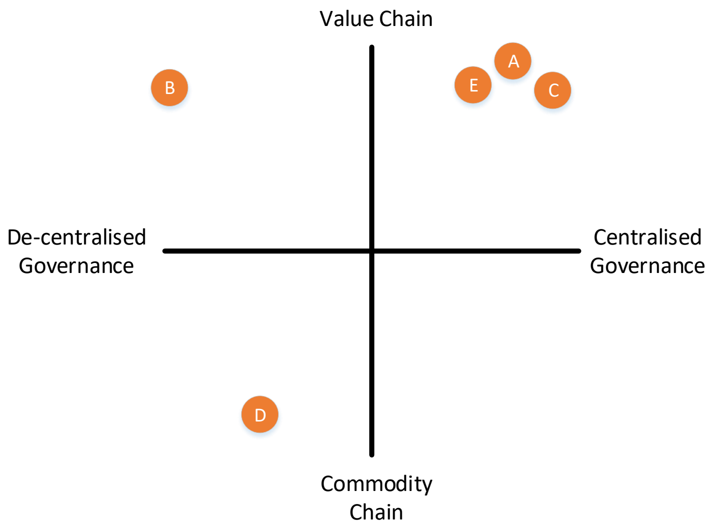
**Table 4.1: Interview Participants**

| | Value Chain Stage | | | |
|---|---|---|---|---|
| **Value Chain** | **Producer** | **Processor** | **Distributor** | **Retailer** |
| **A** | 2 interviews | 1 Interview | 6 Interviews | |
| **B** | 3 Interviews | 1 Interview | 1 Interview (two people) | 4 Interviews |
| **C** | | 1 Interview | 1 Interview | 1 Interview |
| **D** | | 2 Interviews | 1 Interview | 2 Interviews |
| **E** | 1 Interview | 2 Interviews | 2 Interviews | 1 Interview |

The case study investigation identified diverse governance structures. These ranged from decentralised governance to centralised governance, and from commodity products through to value-added production. Where governance is centralised, one firm is responsible for the coordination of the chain. In contrast, decentralised governance results in firms acting with more autonomy within the chain, and these chains may or may not be driven by a set of common goals or shared values.

A value-added production value chain structure suggests the production of differentiated products. Alternatively, a commodity chain suggests the production of a generic product with little focus on attributes outside of the product itself, i.e. credence attributes. A summary of the distinctions between chains can be seen below in Figure 4.1.

**Figure 4-1: Degree of Centralisation of Governance versus Chain Type**




Moreover, Figure 4.2 (see below) illustrates the range of value chain governance structured identified. Each generic stage of the value chain is shown and the vertical space between these illustrates the ‘closeness’ of an association between the focal firm and other actors. The closer the actors, the more collaborative the relationship. Information lines between different stages of the value chain illustrate the richness of the information shared between actors.

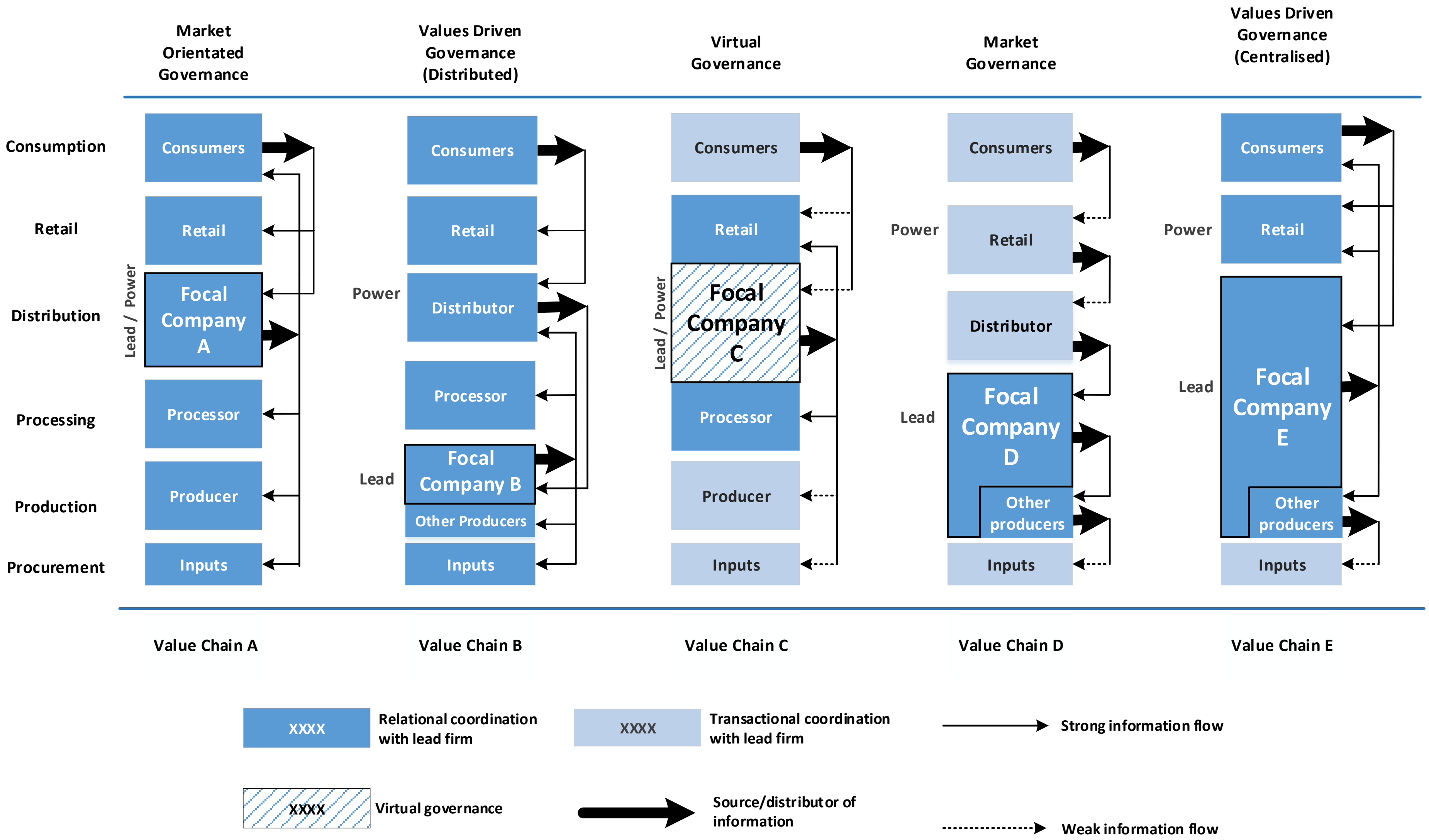
Value chain A has a market oriented governance structure, whereby the focal firm has a very close relationship with the final consumer, and collaborative relationships with actors along the chain (with the exception of the processor). Information is gathered from the final consumer and shared along the chain to all actors to ensure that the final product contains desired attributes at meets quality requirements.

Value chain B is a values driven chain with decentralised governance. Relationships along the chain have been established based upon a set of shared values such as care for the environment, hormone free, grass fed, etc. These common values motivate collaborative relationships within the chain as there is an implicit trust among actors. Indeed, this particular chain is driven largely by informal contracts based on socio-logical constructs. Moreover, the source of power and leadership lie at different stages of the chain. Due to the small scale of production firms retain a sense of autonomy, resulting in de-centralised coordination.

Value chain C is driven by a virtual e-platform that enables integrated information sharing among the processor and retailer, resulting in collaborative relationships among these actors. While a portion of finished product sales do go through traditional retailers, the e-platform also allows for direct processor to final consumer distribution, resulting in decreased costs.

Value chain D is governed by the marketplace. There are few collaborative relationships within the chain and the information sharing is fragmented. Consequently, this chains governance structure more closely resembles that of a traditional agricultural chain. However, due to processing a product that is relatively rare not easily substitutable, the chain is able to demand a price premium in market.

**Figure 4-2: Value Chain Archetypes**



Finally, value chain E is values driven with a centralised governance structure. Coordination of the chain is driven by the focal company. Production and processing of the product are based upon *te ao Māori* principles which provides a key point of differentiation. Economic power resides with the retailer. However, in-market product ambassadors ensure that the story of the product is not lost, but communicated directly with the consumer. The outcome of this being that important credence attributes are communicated to, and understood by the final consumer which ensures that the product continues to be recognised as a high value-added offering.

## 4.2 Value Chain Attributes

This section outlines findings on the eight value chain attributes described in chapter 2 and specifically investigated during the interview phase of this study.

*Market Orientation*

In most chains there was a broad understanding of the final consumer, which was enabled through market research. This research was conducted using surveys; communicating with chefs/processors; supermarket trials; literature reviews; knowledge intensive business services; etc.

A key task in the value chain is to understand which products resonate with final consumers, and then to develop or enhance product attributes to align with consumer preferences. In some cases land-use/practice change was a value driver. For example, the value chain of company B (meat chain) was developed in response to council regulations around nitrogen run-off. This legislation effectively put restrictions on stocking rates that in a traditional commodity chain would result in unprofitable land use due to a lack of scale. Through an understanding of the final consumer, company B was able to develop and market a product that aligns with the values of their chosen consumer target and achieve a price premium.

Following on from this, market segmentation is important in safeguarding demand for a product offering. However because these chains are based upon agricultural production, there is an element of production constraint. A key issue for these chains is ensuring that there is a balance between product supply and market demand. A misalignment between these runs the risk of value chain output being sold as a commodity.

A close connection to the market was also important in trialling new product lines/packaging. The difficulty with land based production is the long lead times associated with product development as product form is difficult to customise. For example, company A (horticultural producer) has an average product development lead time of around seven years. Therefore, it is crucial for this chain to understand consumer preferences before investing large amounts of capital into product development. Additionally, the packaging of a product can become a vehicle for sharing the brand story and product attributes with consumers, while also creating brand recognition.

Finally, social media has become a part of consumers' lives and the potential in this area is being explored by a number of chains as a way of directly communicating.

*Information Enriched Value Chain*

Information sharing is at the core of collaborative relationships – the more they talk, the more they do together!

The most important form of communication in all the chains were face-to-face relationships or, *kanohi ki te kanohi*. This is seen as being crucial for bringing together different stages of the value chain. Other everyday platforms such as telephone and emails were also useful in not only direct communication, but also distributing information such as industry body reports, market information reports, newsletters, etc, particularly to producers and processors.

Cultural and language (bi-lingual) skills were important in communicating values through the different value chains. For example, in the value chains of company D and E, te reo Māori and tikanga Māori are key for understanding *mātauranga* values that these chains embody. Additionally bi-lingual understanding is critical for market branding when exporting to countries with official languages other than English.

*Incentive Alignment*

In many chains, the relationship was seen as more important than a formal contract. That's not to say that contracts are not useful as they are a key way to mitigate risk, especially as the chain grows in scale. However, other relationship factors such as trust and shared values were given a greater weighting. Additionally, it was highlighted in some of the interviews that while contracts are important, there is the risk of a cross-cultural misunderstanding between parties.

Some of the contracts had risk and reward sharing behaviour clauses, whereby incentives were both financial and non-financial. For example, company A operated financial incentive based contracts for producers. However at the downstream end of the value chain, return clauses acted as a risk mitigation for retailers, leading to increased returns throughout the chain.

The key concern for the value chains in the study was uncovering what was important to the final consumer and other actors, and then translating this into a contract to protect those factors and help improve returns through closer relationships. The aim of which was the reduction of frictions and minimization of value destruction.

*Channel Leadership (Power)*

The interview responses suggest there is a difference between the locus of leadership and power in the value chain (see Figure 4.2):

- The leader has a vision for the value chain and will find partners that align with those values.
- The power holders are those parties that hold coordination roles within the chain, or carry weight in terms of influencing negotiations and behaviours of other actors.

For a value chain, power and leadership need to be aligned in order to reduce frictions and produce a product that not only embodies desired credence attributes but also communicates the brand narrative with the final consumer. Where this does not happen, value chain actors need to find a way to mitigate this. For example, in value chain E, the focal company E holds the leadership role. However the economic power within the chain resides with the retailer. As stated above, brand ambassadors employed by company E, residing in market, have direct communication with consumers to understand desired attributes and promote the brand story as a way to avoid losing brand recognition and contact with the final consumer.

Power exercised throughout the value chains was generally non-coercive. Having a clear power holder within the chain means that this actor does not need to exercise coercive power as they generally act as the gate keeper to either value chain participation or market access. Moreover, an important strategic move for all value chains was the choice of connecting with partners who have power, or reach into market, as the result of this was greater market access.

*Integrated Network Governance*

No value chain as a whole possessed a fully integrated governance model. Rather, while some parts of the chain were integrated (company C for example), the whole of the chain was held together and aligned through collaboration. Social activities such as sharing information, shared commitment and culture acted as buffers to build and strengthen relationships, and align values. Governance was more associated with leadership and vision, rather than ownership or power. Consequently, while the value chain may not retain power further downstream, the identity of the chain and the credence attributes of the products were driven by the lead firm. This firm played a large role in coordination and establishment of chain culture.

Further, in the chains where power and leadership resided at the same stage, greater price premiums were achieved. The exception to this was company E who worked to mitigate the distribution of leadership and power through in-market activities. Many value chains in New Zealand lack the scale to be able to hold the power in their respective chains hence, highlighting the importance of in-market activities and communication with the end consumer.

*Value Co-creation*

Value co-creation involved insight and knowledge from partners along the value chain being incorporated into the final product, and two types of value co-creation identified:

- **Purposeful co-creation** – the intentional development of dynamic capabilities with value chain partners.
- **Associative co-creation** – derived from daily operational improvements and innovations that emerge over time through inter-firm learning.

In purposeful co-creation, the driver was to improve returns through working with other chain partners. In other words "help others to help us". All value chains believed that it was important to identify new opportunities through seeking out new partners and/or leveraging existing relationships. For example, company B sought out new relationships with boutique retailers that allowed win-win outcomes. The retailer was aligning itself with a premium, locally produced product, and company B was able to shorten the length of the value chain and gain additional market access.

*Resilience and Adaptability*

A major response to this attribute was that there are very few formal risk plans in place for producers. The main risks identified by participants:

- Agricultural chains suffer from continuous supply inelasticity.
- Geographical restraints in terms of scalability of production and legislation.
- Traceability systems had issues around breaks and granularity of data.

However, these chains also have a relatively high degree of resilience and adaptability built in through various instruments. Company A enacted contracts that shared risk and rewards. Additional risk was taken on at the retailer end of the value chain through a returns policy. However, this also meant that greater rewards were passed back upstream to producers. Further, social and financial support for producers in times of crisis was seen as crucial in developing resilience.

Another major enabler of resilience was the shared values system that the value chains possessed. This was extremely important in fostering a sense of community among actors and acted as a support system. In particular, the values of *whanaungatanga* (relationship, kinship, sense of family connection) and *manaakitanga* (hospitality, kindness, generosity, support) were highlighted in the responses received from participants.

*Brand Ownership and Control*

The ability to control and maintain the integrity of the brand story throughout the chain to the final consumer was a critical component in being able to capture value. The brand story can be modified in reaction to market signals and tailored to different markets, and respondents highlighted that this was much easier to customise than the product. However, the story still needs to be aligned with the core values of value chain in order to maintain integrity.

The key gap for most chains was in-market, in terms of the ability to project brand values and images to consumers. To counter this, chains undertook a variety of initiatives:

- Brand ambassadors in-market; face-to-face relationships between producers and consumers.
- Bringing actors from all stages of the value-chain to producers. Alternatively, taking producers to the consumer.
- Organisational artifacts reinforcing cultural keystones – promotes internal brand alignment.

An additional risk within the value chain highlighted was not delivering on brand promises, especially after the chain had built trust with the consumer. Chains were well aware of this potential issue, and many had strict quality regulations, or employed external bodies to audit and assess brand claims, noting that a truthful brand story contributed to a social license to operate.

## 4.3 Supplementary Value Chain Attributes

During the transcription of the interview, three additional value chain attributes emerged from the data: (1) values; (2) geographic and time compression; and (3) product quality.

*Values*

The importance of values was highlighted by all of the value chains in being a critical component in developing collaborative relationships and acting as a governance mechanisms in terms of aligning the chain. Additionally, these values were hugely important in developing a brand identity and became important in the creation of relationships. For example, value chain D and E are chains based upon indigenous values:

- *Kaitiakitanga* – guardianship and stewardship of natural resources
- *Hihiko* – inspired and energetic improvement and innovation
- *Whanaungatana* – kinship and relationship with value chain actors
- *Rangatiratanga* – leading through excellence
- *Manaakitanga* – supporting other members so that all may benefit
- *Pono* – integrity at the heart of all decisions

These values drive the relationship and production decisions made throughout the chain. Other chains had values more closely aligned with producing a natural food product. For example, company A values sustainability, traceability, social responsibility, quality, and food safety and security. These values were then translated to producers through a variety of mechanisms such as contract arrangements, quality systems, and information sharing.

*Geographic and Time Compression*

Because the chains are land based, they are constrained by environmental factors. Additionally, the physical location of actors in the value chain, and the lead time, have an impact upon profits. With the exception of company C who extracted raw and non-perishable material, the value chains had production and processing locations compressed to a relatively short distance in order to reduce transport costs and maintain product quality. Where production was spread throughout different regions, processors were strategically placed within the growing area.

Additionally, time compression was an important consideration for these value chains, especially in terms of product development and time to market. In reference to product development, company A viewed the innovation lead time as a critical component in maintaining a competitive advantage in the market place.

Moreover, when dealing with perishable food products, time to market becomes an important consideration in maintaining quality and reducing food loss.

*Product Quality*

Product quality is important to every value chain, however it is particularly critical in those chains dealing with food products as food safety and security are large concerns. This importance was highlighted by several of the value chains examined, noting that product quality was a way of enforcing the brand promise sold to consumers and improving profits. Common actions were undertaken by the value chains:

- Entering into certification schemes, audited by a third party
- Having strict product requirements, beginning upstream at the inputs/producer level

Further, some chains had additional schemes. For example in the case of company B, retailers from in-market worked face-to-face with processors on shore in New Zealand to help develop butcher skills unique to those seen domestically. As a result, the meat meets the tightly specified requirements of the market destination.

## 4.4 Summary

It is clear when it comes to governance that not one size fits all. The interviews highlighted a number of governance structures used by each value chain in order to distribute value returns right along the chain. Some chains were more collaborative than others; however, all were aligned through shared goals, visions, and values.

Many of the value chain attributes have close interlinkages with others, yet each is distinct. This highlights the interdependencies that exist among attributes. It is difficult, for example, to have a market orientation, yet a lack of information sharing. Further, the addition of three new attributes to the research stressed the importance of operational factors alongside the relational ones. It is not possible to have a sustainable collaborative value chain without an emphasis on product quality that acts to enforce the brand story.

Following this, the final chapter summarises the key findings of this research and addresses the research questions set out in chapter 1.

# Chapter 5
# Conclusions

This chapter outlines the key findings of the research, before addressing the research questions and providing some concluding remarks.

## 5.1 Key Findings

Market orientation was important to all chains. Even when the primary product has limited customizability, the story is more able to be tailored to each market. Additionally, *manaakitanga* or caring for the consumer was a key driver for the value chains in ensuring that the product was produced to consumer needs, and met all quality and safety standards.

Information sharing among chain members was largely facilitated by the lead firm in the chain and all chains regarded information as critical. Most information existed in traditional forms of communication and there were very few integrated information technology systems present in the chains.

Traditional economic theory makes assumptions about rationality of actors and opportunistic behaviour, citing the importance of formal contracts. However in the chains examined, collaborative governance was more important than contracts and incentive clauses. Hence, social behaviours play a large role in developing and maintaining relationships.

All value chains highlighted the importance of 'values' as opposed to 'value'. While value is an important driver of chain activities, firms were largely concerned with developing relationships in which trust became implicit, based upon a foundation of shared values, vision, and culture. The presence of these throughout the chain, in addition to supporting incentives, was crucial in ensuring alignment within the value chain – a key to reducing frictions.

Additionally, the values held by different chain actors drive land-use change. Values such as environmental sustainability, or *kaitiakitanga*, influence the way in which actors behave and so the value derived from land use was secondary. An interesting finding given the conceptual framework used to guide this research was based upon 'value' and customer demands.

There was a distinction between leadership and power (see previous chapter). Further, the leader may not be the most powerful actor in the chain. However, they act as the *kaumātua* in the chain, holding and up keeping the shared values, and can engage in a number of activities in order to mitigate the power that downstream actors hold and communicate with the final consumer.

Governance in value chains can be achieved through either centralised or decentralised governance, and both forms are able to achieve greater returns than a traditional supply chain. However, caution must be used in adopting a decentralised governance typology as the key factor in achieving value outcomes is by aligning the value chain through collaborative relationships and values.

Innovation and learning was seen as a crucial in ensuring that value chains remain competitive and continue to produce a value-added differentiated product. Value co-creation placed a heavy emphasis on this in terms of developing dynamic capabilities and improving the market proposition.

Finally, product quality was hugely important to the value chains examined, as it was seen as a critical factor in enforcing the brand promise sold to consumers. Certification schemes and quality control programs were undertaken by most of the value chains and communicated to consumers through labelling and the telling of the brand story. The outcome is the trust built by consumers.

## 5.2 Addressing the Research Questions

The first chapter developed three research questions that this study aimed to answer. The following is a brief summary of the answers developed to these questions.

***RQ1. How is value perceived within firms and in exchange?***

a. Values, rather than value are the key drivers of the value chain

b. Market orientation is critical in achieving value outcomes (profits), and is particularly important in in-market gaps

***RQ2. How is value created and governed in agricultural value chains?***

a. Value is created in line with the values of the value chain, rather than power

b. Relational governance archetypes (market oriented, distributed, virtual, market, centralised)

***RQ3. How do agricultural value chains alter or reconfigure themselves in relation to value signals?***

a. The shared values system fosters a sense of community and formal contracting incentivises production through shared risk and rewards - builds resilience and adaptability into the chain

b. Dynamic alignment of capabilities with partners

c. Reconfiguration is limited by product format and finite resources for production

## 5.3 Summary

This research explored several value chain attributes through an examination of five New Zealand based value chain case studies. It was found that the value chains that adopted a strong consumer focus, or placed a large emphasis on *manaakitanga* were able to out-perform those that do not. This was not surprising given that market orientation is closely correlated with learning and innovation, which in turn results in improved profits.

If New Zealand is to reach the primary sector export target of $64 billion by 2025, as set by the Ministry for Primary Industries, chains need to be producing high value-added products that align closely to the needs of the consumer. In terms of establishing and maintaining relationships that allow firms to do this, a set of shared values is crucial. These values align the activities of the value chain as they drive desired outcomes and reduce opportunistic behaviour between actors.

In addition to these shared values, collaborative relationships underpinned by formal contracts are needed. Collaborative relationships rely on normative behaviours such as trust, commitment, and dependence. Where there are a set of shared values in the relationship, trust is already implicit in the exchange, and so there is a strong foundation with which to develop the partnership. A formal contract then seeks to ensure that incentives are aligned and reduce frictions in the chain, leading to reduced costs and less value leakage.

While the findings of this research have provided a strong insight into the workings of collaborative, market oriented chains, more research is needed in this area. It would be beneficial for future research to focus on the creation of market oriented value chains, or to investigate how firms may adapt current practices to "break out" of producing commodities, and move into the high value-added market segment. The hope would be for the development of more sustainable value chains in New Zealand.

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